

CLAIMS

1. A disk drive comprising a disk holder that comprises a plurality of disk holding members that individually hold a plurality of disks, a drive unit for playing back a desired disk, a disk selector that forms a space above and below the desired disk by causing the disk holding members to rise and fall; and drive movement means that allows the drive unit to move into a space that is formed by the rise and fall of the disk holding members,

wherein the disk selector is provided so as to be capable of performing a sliding movement in a horizontal direction;

the disk selector comprises a flat cam in which a protrusion provided on the disk holding member is capable of performing a sliding movement; and

the tip of the cam is wedge-shaped so that the disk holding members above and below the desired disk rise and fall in accordance with the sliding movement of the disk selector.

2. The disk drive according to claim 1, wherein elevation means that causes the disk selector to rise and fall in accordance with the height of the desired disk is provided.

3. The disk drive according to claim 1 or 2, wherein disk grasping means for grasping the desired disk when the disk

holding members are raised and lowered by the disk selector is provided.

4. The disk drive according to any one of claims 1 to 3, further comprising:

a disk selector driving mechanism that operates by means of a single drive source such that a pair of the disk selectors operate in sync.

5. The disk drive according to any one of claims 1 to 4, wherein the cam comprises an upper cam that raises the disk holding member above the desired disk holding member, a lower cam that lowers the disk holding member below the desired disk holding member and a middle cam provided between the upper cam and the lower cam that holds the desired disk holding member, in order to form a space that allows mounting and removal of a disk above or below the desired disk holding member in accordance with the sliding movement of the disk selector,

wherein the middle cam communicates with the upper cam or the lower cam so as to raise or lower the desired disk holding member in accordance with an additional sliding movement of the disk selector.

6. The disk drive according to any one of claims 1 to 5, wherein a pair of the disk selectors are arranged on one pair

of side portions of the disk holder that are orthogonal to each other; and

the drive unit, and disk insertion/ejection means that inserts and ejects the disk into and from the disk holder are arranged respectively on the other pair of side portions of the disk holder that are orthogonal to each other.

7. A drive unit driving mechanism having a drive unit for playing back disks, a drive base for supporting the drive unit, and drive base movement means that allows the drive base to move into a space that is produced through division of a disk holder that is capable of storing a plurality of disks, comprising:

an elastic member that elastically supports the drive unit on the drive base; and

a floating lock mechanism that is driven by the drive base movement means and switches between a floating state where the drive unit is supported by only the elastic member and a locked state where the drive unit is fixed to the drive base,

wherein the drive unit is provided with a turntable where a disk to be played back is mounted and a disk clamping mechanism that is driven by the drive base movement means and which sandwiches the disk to be played back between the disk clamping mechanism and the turntable.

8. The drive unit driving mechanism according to claim

7, wherein the drive base movement means can be operated by a single drive source.

9. The drive unit driving mechanism according to claim 7 or 8, wherein the drive base can be turned by the drive base movement means.

10. The drive unit driving mechanism according to any one of claims 7 to 9, wherein the floating lock mechanism comprises a slide lock plate provided so as to be capable of performing a sliding movement on the drive base in order to reduce the height of the elastic member by biasing the drive unit toward the drive base side in the locked state and restore the height of the elastic member by releasing the drive unit in the floating state.

11. The drive unit driving mechanism according to claim 10, wherein the disk clamping mechanism comprises a clamper arm that changes position in accordance with the movement of the slide lock plate and a clamper ring that contacts and moves away from the disk in accordance with the change in position of the clamper arm.

12. The drive unit driving mechanism according to claim 11, wherein single biasing means that biases the drive base and the slide lock plate such that the transition from one to the

other of the movement of the drive base and the sliding movement of the slide lock plate is performed continuously is provided.